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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,736	11/20/2003	Scott E. Black	BO1 - 0019US	8708

60483 7590 05/18/2006

LEE & HAYES, PLLC  
421 W. RIVERSIDE AVE.  
SUITE 500  
SPOKANE, WA 99201

EXAMINER

LAU, TUNG S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/717,736

Applicant(s)

BLACK ET AL.

Examiner

Tung S. Lau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>See office action</u> .                                                   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. A response on 01/03/2006 a provisional election was made **without traverse** to prosecute the invention of claims 1-17. Claims 18-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Because these inventions are distinct for the reasons given on action dated 03/25/2005, the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### **Joint inventor**

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor and invention dates

of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### **Arrangement of the Specification**

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR  
DEVELOPMENT.

(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

"Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

**Information Disclosure Statement**

4. Information Disclosure Statement filed on 03/05/2004 is acknowledged by the examiner; A copy of a signed PTO-1449 attached with this office action.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Osder (U.S. Patent 5,678,786).

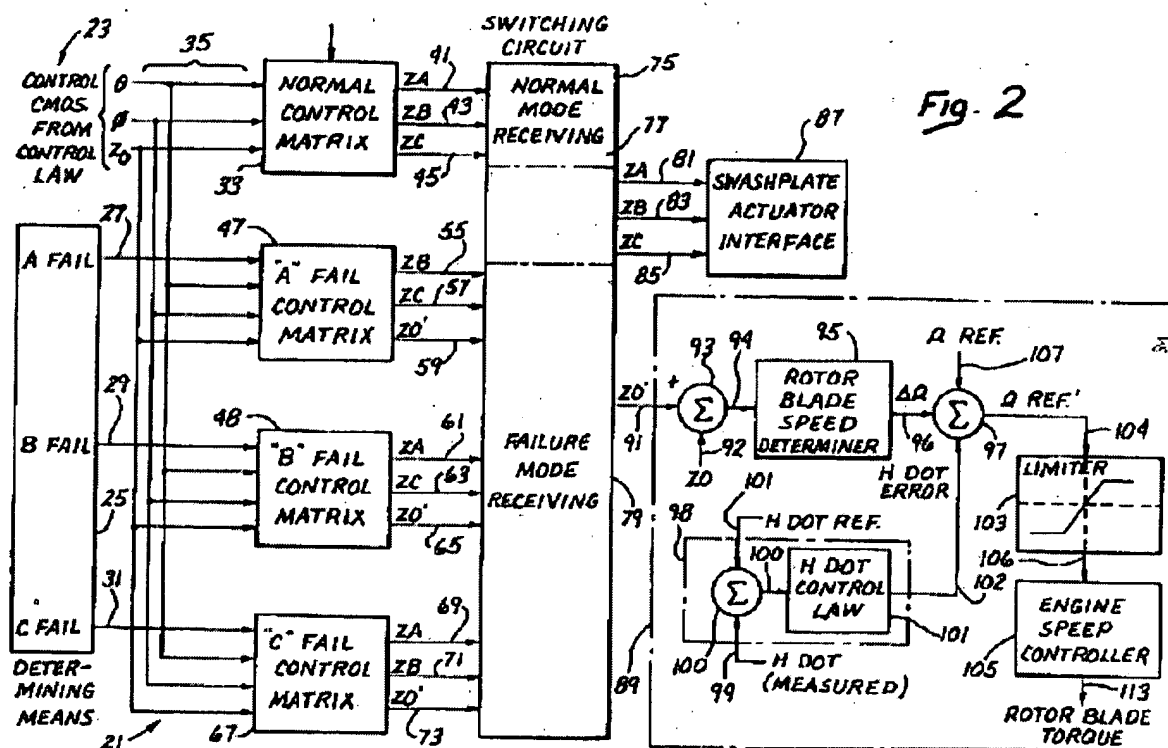
Regarding claim 1:

Osder discloses a method of operating a product, comprising: monitoring a first diagnostic information of a component of the product (Col. 3, Lines 30-61, fig. 2, unit 27, 47); monitoring a second diagnostic information of a system of the product (Col. 3, Lines 30-61, fig. 2, unit 29, 48), the system including the component (Col. 3, Lines 30-61); combining the first diagnostic information of the component and the second diagnostic information of the system (Col. 3, Lines 30-61); and based at least partially on the combined first and second diagnostic information, reconfiguring at least one of the component and the system (Col. 3-4, Lines 50-20).

Regarding claim 2, Osder further discloses monitoring a first diagnostic information of a component includes monitoring a health indication of the component (Col. 4, Lines 8-19); Regarding claim 3, Osder further discloses monitoring a first diagnostic information of a component includes monitoring a capability indication of the component (Col. 12, Lines 46-56, fig. 2, unit 35); Regarding claim 4, Osder further discloses monitoring a first diagnostic information of a component includes monitoring a reliability indication of the component (Col. 13, Lines 24-39); Regarding claim 5, Osder further discloses

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monitoring a information of a component includes monitoring a first diagnostic information of an actuator (Col. 4, Lines 39-50).



Regarding claim 6, Osder further discloses monitoring a second diagnostic information of a system includes monitoring a health indication of the system (Col. 3, Lines 39-50, fig. 2, unit 48); Regarding claim 7, Osder further discloses monitoring a second diagnostic information of a component includes monitoring a capability indication of the component (Col. 12, Lines 46-56, fig. 2, unit 48); Regarding claim 8, Osder further discloses monitoring a second diagnostic information of a component includes monitoring a reliability indication of the component (Col. 13, Lines 24-39, fig. 2, unit 48); Regarding claim 9, Osder further discloses monitoring a second diagnostic information of a system includes

monitoring a second diagnostic information of a flight control system (Col. 3, Lines 40-61, fig. 2, unit 48); Regarding claim 10, Osder further discloses reconfiguring at least one of the component and the system includes reconfiguring a flight control system to take into account a degradation of an actuator (Col. 3-4, Lines 39-7); Regarding claim 11, Osder further discloses feeding back the reconfiguring of the at least one of the component and the system into the fusion of the first and second diagnostic information (Col. 3-4, Lines 39-19, fig. 2, unit 79, 95); Regarding claim 12, Osder further discloses inputting the combined first and second diagnostic information into a maintenance support block (fig. 2, unit 79, 95, 98); Regarding claim 13, Osder further discloses inputting the combined first and second diagnostic information into a maintenance support block includes inputting the combined first and second diagnostic information into the maintenance support block to at least one of enable post-flight analysis and interpretation, and assist in assessing the prognosis of the component and system (Col. 3-4, Lines 39-33, fig. 2, unit 75, 89); Regarding claim 16, Osder further discloses reconfiguring at least one of the component and the system includes reconfiguring at least one of the component and the system using an integrated vehicle health management system (fig. 2, unit 79, 89, Col. 3-4, Lines 39-34); Regarding claim 17, Osder further discloses integrating an integrated vehicle health management system will reconfigurable control, and performing tests of at least one of the component and the system



during actual operation of the product (Col. 3-4, Lines 39-20, fig. 1, fig. 2, unit 75, 89).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osder (U.S. Patent 5,678,786) in view of Board et al. (U.S. Patent 6,351,713).

Regarding claim 14, Osder discloses a method including the subject matter discussed above except to reduce false alarm in a build in test system, Board discloses to reduce false alarm in a build in test system (Col. 3, Lines 1-11), in order to maximize fault detection probability (Col. 3, Lines 1-4), and increase reliability of the helicopter (Col. 2, Lines 47-53, Col. 3, Lines 1-11).

Regarding claim 15, Osder discloses a trending one or more degradation to provide a prognostic capability (Col. 3, Lines 39-50, fig. 2, unit 89, 75).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Osder to reduce false alarm in a build in test

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system taught by Board in order to maximize fault detection probability and increase reliability of the helicopter.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Osder and Board are analogous art because they are from the same field of endeavor, detecting faulty system in a helicopter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tung S. Lau

AU 2863, Patent examiner

May 15, 2006